

# **TITLE of the INVENTION**

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"Turbocoding methods with a large minimum distance,  
and systems for implementing them"

## **TEXT of the ABSTRACT**

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Turbocoding methods use a first RSC coder operating on sequences of binary data  $\underline{a}$ , and a second RSC coder operating on binary sequences  $\underline{a}^*$  each obtained from  $\underline{a}$  by means of a predetermined permutation. These permutations are designed so that, for any sequence  $\underline{a}$  represented by a polynomial divisible by the recursion polynomial, the associated sequence  $\underline{a}^*$  is also represented by a polynomial divisible by said recursion polynomial. These permutations are relatively simple to implement, and are applicable to all the data sequences  $\underline{a}$  whose length is a multiple of the period of the recursion polynomial. In addition, once the transfer functions of said coders and said sequence length have been chosen, it is possible to select, amongst the corresponding permutations, the one which will probably offer the highest minimum distance of the code. Application to devices and apparatus implementing these methods.

Figure for the abstract: FIG. 1